zation has been previously practised by other workers, but as I have never seen mention made of it, I bring it to the attention of bacteriologists.

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Cancer, Its Cause and Treatment. By L. DUNCAN BULKLEY, M.D. New York, Paul B. Hoeber, 1915.

Various writers, especially Williams in his book on the natural history of cancer, have attributed great significance to the mode of life, especially to the diet as a factor in the origin of cancer. He pointed out that cancer is much less frequent among races which are vegetarian. Dr. Bulkley defends in his lectures a similar thesis: cancer (both carcinoma and sarcoma) is due to errors in the mode of living, not only to an overindulgence in a meat diet, leading to the production of nitrogenous poisons which are not properly eliminated, but also to the consumption of tea, coffee and alcohol. In consequence the saliva becomes acid, increased putrefaction takes place in the large intestines, the glands with internal secretion do not functionate well, the kidneys cease to secrete sufficiently, and the body fluids which bathe the cells become abnormal (especially too acid), thus stimulating certain embryologically aberrant cells to cancerous growth. Other factors, like traumatism play only a secondary part. In support of his views the author cites statistical data which show that frequency of cancer is greatest where so-called civilization has farthest advanced, that the increase in cancer which is observed everywhere is real and caused by a corresponding increase in false living; that experimentally it has been shown that the growth of (transplanted) cancer in animals can be influenced through certain diets; that clinically, cancer has been cured by the author in a considerable number of cases by instituting an appropriate mode of living aided by the use of drugs stimulating elimination of waste products and certain other procedures.

It is impossible to enter into a detailed critical analysis of this position. We must, however, point out that throughout the author's argumentation no sharp distinction is made between fact and hypothesis. Facts opposed to his thesis are ignored or minimized in their importance. We may mention a few objections which might be raised: We do not know at the present time how much the mode of living, external conditions and hereditary factors influence the distribution of cancer among different people. We know that constant irritation of certain kinds may produce cancer in a large percentage of persons, provided the irritation is active over a sufficiently long period of time. We have shown that on the same mouse farm in Granby, under the same vegetarian diet, certain strains of mice are almost exempt from cancer, while in other strains, as a result of hereditary peculiarities, the large majority of all females become affected by cancer of the breast. It is now known that the presence of embryologically displaced cell nests is not necessary for the development of cancer.

There occur in addition to the main arguments not infrequently statements which are open to criticism. To cite a few: "The cells themselves must be influenced ultimately by that mysterious force which we will call life, which ends with its extinction from the body as a whole and which is ultimately related to nerve action." The thyroid is said to be of great importance in governing the calcium metabolism. The same principles are said to hold good for the treatment of skin diseases and for cancer in general, because both concern aberrations in the behavior of epithelial cells; but internal organs like pancreas and liver, although they are of epithelial character, nevertheless do differ in their behavior from the skin. Postoperative recurrences of cancer are, according to the author, due to a transformation of formerly healthy cells into cancer cells as a result of faulty metabolism and not, as is almost generally assumed, to the incomplete removal of the original cancer.

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